

# Maine Women's Health Report 2011

Prepared by:  
Department of Applied Medical Science  
College of Science, Technology and Health  
University of Southern Maine



*Paul R. LePage, Governor*

*Mary C. Mayhew, Commissioner*

This publication was supported by Maine’s Maternal and Child Health Block Grant from the Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau. Its contents are solely the responsibility of the authors and do not represent the official view of HRSA.

Contributors:

**University of Southern Maine**

Erika Lichter, ScD  
Robyn Reynolds, MPH  
Finn Teach, MPP  
Alison Green-Parsons  
Amy Harris, RN, MPH



**Maine Center for Disease Control and Prevention**

Shannon King, Women’s Health Coordinator

Acknowledgements:

The University of Southern Maine and the Maine Center for Disease Control and Prevention’s Women’s Health Coordinator would like to acknowledge the support and feedback from the members of the Maine Women’s Health Campaign, as well as program managers in the Maine CDC’s Divisions of Chronic Disease, Family Health, and Infectious Disease for their feedback on drafts of this report.

The Maine Women’s Health Campaign (MWHC) is a public and private sector partnership founded in 1996 to enhance the health and well-being of women and girls in Maine. MWHC’s mission is to encourage and support an environment that enhances Maine women’s and girls’ health by:

- Creating and supporting policies at the local, statewide and institutional levels that will improve access and availability to comprehensive services;
- Engaging, informing and networking individuals and agencies invested in improving Maine women and girls’ health;
- Expanding and supporting existing programs;
- Fostering and sustaining innovative programs and inter-organizational collaboration;
- Promoting innovations and best practices in data collection and analysis, program planning, service delivery and evaluation;
- Advancing a multi-disciplinary vision of women’s health across the lifespan.

# Table of Contents

Chapter	Page
Contributors.....	2
Index of Figures and Tables.....	4
Executive Summary.....	10
Introduction & Background.....	17
Technical Notes.....	23
Chapter 1: Demographics/Economics.....	26
Chapter 2: Reproductive Health.....	38
Chapter 3: Chronic Disease.....	64
Chapter 4: Unintentional and Intentional Injury.....	95
Chapter 5: Mental Health.....	112
Chapter 6: Substance Abuse.....	123
Chapter 7: Health Risks and Health Promotion.....	135
Chapter 8: Cancer Screening.....	149
Chapter 9: Healthcare Access.....	158
Conclusion.....	163

# Table & Figure Index

## Figure Index

Figure #	Page #	Figure Name
a.1	19	Maine's Public Health Districts
1.1	26	Median age by sex, Maine, 2000-2009
1.2	27	Age distribution of population by sex, Maine, 2010
1.3	28	Percentage change in race and ethnicity among females, Maine, 2000-2009
1.4	31	Education level of population aged 25+ by sex, Maine, 2005-2009
1.5	32	Females aged 20-64 by household composition and employment status, Maine, 2005-2009
1.6	33	Median annual earnings by sex and level of education, Maine, 2005-2009
1.7	35	Rate per 1,000 women aged 18-59 enrolled in TANF or SNAP, Maine, 2000-2009
2.1	38	Population count of females by age, Maine, 2000-2009
2.2	40	Primary contraception used by female family planning clients by age and method, Maine, FY2009
2.3	40	Proportion of females diagnosed with HIV (of new HIV diagnoses), Maine, 2005-2009
2.4	42	Chlamydia rates among females, Maine and the US, 2000-2009
2.5	43	Reported cases of gonorrhea among women, Maine, US and the Northeast, 2005-2009
2.6	47	Percent of females receiving prenatal care in the first trimester and the percent receiving adequate prenatal care, Maine, 1999-2009
2.7	48	Females receiving early prenatal care by public health district, Maine, 2005-2009
2.8	52	Birth rates and number of live births by year, Maine, 2000-2009
2.9	53	Rate of births to Maine females by maternal age, 2009
2.10	55	Adolescent birth rates (per 1,000) by age group, Maine, 2000-2009
2.11	56	Unintended births by age, Maine, 2000-2009
2.12	57	Percent unintended births by income level, Maine 2009
2.13	58	Percent of live births delivered by cesarean section, Maine and US, 1999-2009
3.1	65	Age-adjusted COPD mortality rates per 100,000 by sex and age, Maine, 2005-2009
3.2	65	Age-adjusted COPD hospitalization rates per 10,000 by sex and age, Maine, 2005-2009
3.3	66	Age-adjusted COPD hospitalization rates per 10,000 by sex and public health district, Maine, 2005-2009
3.4	68	Prevalence of current asthma among females by education level, Maine, 2005-2009
3.5	68	Prevalence of current asthma among females by income, Maine, 2005-2009
3.6	69	Age-adjusted asthma hospitalization rates per 10,000 by sex and age, Maine, 2005-2009
3.7	71	Age-adjusted mortality rates per 100,000 for the 10 leading causes of female cancer deaths by sex, Maine, 2005-2009

## Table & Figure Index

3.8	72	Age-adjusted mortality rates per 100,000 for all cancer deaths among females by age, Maine, 2005-2009
3.9	72	Age-adjusted cancer mortality per 100,000 among females by public health district, Maine, 2005-2009
3.10	73	Age-adjusted incidence rates per 100,000 for all cancer deaths among females by age, Maine, 2006-2008
3.11	74	Age-adjusted cancer incidence rates per 100,000 among females by public health district, Maine, 2006-2008
3.12	78	Age-adjusted heart disease and stroke mortality rates per 100,000 females by year, Maine, 1999-2009
3.13	79	Age-adjusted heart disease and stroke mortality rates per 100,000 by age, condition and sex, Maine, 2005-2009
3.14	80	Age-adjusted heart disease and stroke mortality rates per 100,000 among females by public health district, Maine, 2005-2009
3.15	81	Age-adjusted heart disease and stroke hospitalization rates per 10,000 females by year, Maine, 1999-2009
3.16	82	Age-adjusted heart disease and stroke hospitalization rates per 10,000 among females by public health district, Maine 2005-2009
3.17	84	Prevalence of diabetes among females by education, Maine, 2005-2009
3.18	85	Prevalence of diabetes among females by income, Maine, 2005-2009
3.19	86	Age-adjusted diabetes mortality rates per 100,000 by age and sex, Maine, 2005-2009
3.20	86	Age-adjusted diabetes hospitalization rates per 10,000 by sex, Maine, 2005-2009
3.21	89	Females who did not see a dentist in the past year by education, Maine, 2005-2009
3.22	89	Females who did not see a dentist in the past year by annual household income, Maine, 2005-2009
4.1	95	Injury deaths, hospitalizations, and ED visits as a percent of total deaths by sex, Maine, 2004-2008
4.2	96	Female age-adjusted rates of injury death, US and Maine, 2003-2007
4.3	98	Age-adjusted rates of leading causes of injury-related deaths among females, Maine, 1999-2008
4.4	100	Age-specific injury mortality rates by sex and age, Maine, 2008
4.5	100	Age-specific injury hospitalization rates by sex and age, Maine, 2008
4.6	103	Injury mortality and hospitalization rates among females by public health district, Maine, 2004-2008
4.7	104	Intimate partner violence in the past year among adults by sex, Maine, 2007-2008
4.8	106	Prevalence of lifetime rape or attempted rape among females by education, Maine, 2006
4.9	107	Prevalence of lifetime rape and attempted rape among females by annual household income, Maine, 2006
5.1	113	Mean number of days mental and physical health not good in past 30 days by sex, Maine, 2005-2009
5.2	115	Mean number of days mental and physical health not good in past 30 days by sex and age, Maine, 2005-2009
5.3	118	Prevalence of anxiety and depression among Maine females by education, Maine, 2006-2009

## Table & Figure Index

5.4	119	Prevalence of depression and anxiety among females by annual household income, Maine, 2006-2009
5.5	120	Age-adjusted rate of hospitalizations for depression by sex and year, Maine, 1999-2009
6.1	125	Prevalence of alcohol consumption among females by education, Maine, 2005-2009
6.2	125	Prevalence of alcohol consumption among females by annual household income, Maine, 2005-2009
6.3	127	Age-adjusted rate of hospitalizations for alcohol by sex and year, Maine, 1999-2009
6.4	128	Age-adjusted rate of hospitalizations for opioids, by sex and year, Maine, 1999-2009
6.5	129	Age-adjusted rate of hospitalizations for "other drugs" by sex and year, Maine, 1999-2009
6.6	130	Substance abuse admissions and unduplicated client count by sex, Maine, 2000-2010
6.7	130	Unduplicated substance abuse treatment admissions by age group and sex, Maine, 2010
6.8	131	Unduplicated substance abuse treatment center admissions by primary drug, female clients, Maine, 2010
6.9	132	Percent and unduplicated count of female clients pregnant at substance abuse treatment facilities, Maine, 2001-2010
7.1	136	Prevalence of overweight and obesity (BMI $\geq$ 25) by age and sex, Maine, 2005-2009
7.2	137	Prevalence of obese and overweight (BMI $\geq$ 25) among females by education, Maine, 2005-2009
7.3	137	Prevalence of obesity and overweight (BMI $\geq$ 25) in females by annual household income, Maine, 2005-09
7.4	140	Females who meet requirements for moderate or vigorous physical activity by education, Maine, 2005, 2007, 2009
7.5	141	Females who meet requirements for moderate and vigorous physical activity by income, Maine, 2005, 2007, 2009
7.6	143	Prevalence of females who consume 5+ fruit and vegetable servings per day by education, Maine, 2005, 2007, 2009
7.7	145	Prevalence of females who consume 5+ fruit and vegetable servings per day by income, Maine, 2005, 2007, 2009
7.8	146	Prevalence of current smoking among females by education, Maine, 2005-2009
7.9	146	Prevalence of current smoking among females by annual household income, Maine, 2005-2009
8.1	150	Prevalence of mammogram testing in past 2 years by education, females 40+ years, Maine, 2006 and 2008
8.2	151	Prevalence of mammogram testing in past 2 years by income, females 40+ years, Maine, 2006 and 2008
8.3	153	Prevalence of pap testing in females 18+ years in past 3 years by education, Maine, 2006 and 2008
8.4	153	Prevalence of pap testing in females 18+ years in past 3 years by income, Maine, 2006 and 2008
8.5	155	Prevalence of sigmoidoscopy or colonoscopy in females aged 50+ years by education, Maine, 2006 and 2008
8.6	155	Prevalence of sigmoidoscopy or colonoscopy in females aged 50+ years by income, Maine, 2006-2008

## Table & Figure Index

### Table Index

Table #	Page #	Table Name
a.1	21	Five leading causes of death among females in Maine overall and by age, 2004-2008
1.1	30	Marital status of adults by age and sex, Maine, 2005-2009
1.2	32	Labor force participation by age and sex, US and Maine, 2008-2009
1.3	34	Poverty level by age and sex, Maine, 2005-2009
1.4	34	Percent living below poverty by family type, Maine, 2005-2009
2.1	39	Percent of females age 15+ years by age, race and ethnicity, Maine, 2009
2.2	41	Number and rate of persons living with HIV/AIDS by age, Maine, 2009
2.3	41	Methods of HIV transmission among females, Maine, 2009
2.4	42	Counts and rate (per 100,000) of Chlamydia by age and sex, Maine, 2009
2.5	44	Pregnancy outcome rates (per 1,000 female population) among females aged 15-44 years, Maine, 1985-2009
2.6	45	Outcomes for reported pregnancies by maternal age, Maine, 2006-2009
2.7	45	Pregnancy rate and outcomes by public health district, Maine, 2006-2009
2.8	48	Early prenatal care by age, race, ethnicity, and education, Maine, 2005-2009
2.9	49	Pre-pregnancy weight status among new mothers by demographics, Maine, 2009
2.10	50	Proportion of females who smoked during last three months of pregnancy by demographic characteristics, Maine, 2009
2.11	52	Maternal medical risks, live births, Maine resident data, 2009
2.12	54	Maternal demographics, Maine (2009) and US (2008)
2.13	55	Maternal race, live births, Maine resident data, 1994-2009
2.14	59	Initiation of breastfeeding by demographic characteristic among new mothers, Maine, 2008
2.15	60	Self-reported reasons for not breastfeeding, PRAMS, 2004-2008
2.16	61	Prevalence of postpartum depression symptoms among new mothers by demographic and health factors, Maine, 2004-2008
3.1	67	Current asthma prevalence by sex, U.S. and Maine, 2005-2009
3.2	67	Current asthma prevalence in adults by age and sex, Maine, 2005-2009
3.3	69	Asthma emergency department visit rates (ICD-9 493, Principal) by age and sex, Maine, 2004-2008
3.4	70	Asthma hospitalization counts and rates by sex and public health district, Maine, 2005-2009
3.5	73	Age-adjusted cancer incidence rates among females by cancer type, U.S. and Maine, 2004-2008
3.6	76	Hypertension and high cholesterol prevalence by sex, U.S. and Maine, 2005-2009
3.7	81	Age-adjusted hospitalization rates (per 10,000) of heart disease and stroke among women by age, Maine, 2005-2009
3.8	83	Diabetes prevalence by sex, U.S. and Maine, 2005-2009
3.9	83	Pre-diabetes prevalence by sex, Maine, 2008

## Table & Figure Index

3.10	84	Diabetes prevalence in adults by age and sex, Maine, 2005-2009
3.11	85	Diabetes prevalence by public health district and sex, Maine, 2005-2009
3.12	87	Adults aged 65+ who have had all of their natural teeth extracted by sex, U.S. and Maine, 2006 and 2008
3.13	88	Adults who did not visit a dentist in the past year by sex, U.S and Maine, 2006 and 2008
3.14	88	Adults aged 65+ who have had all their natural teeth extracted by age and sex, Maine, 2005-2009
3.15	88	Adults who did not visit a dentist in the past year by age and sex, Maine, 2005-2009
3.16	90	Adults who did not visit a dentist in the past year by public health district and sex, Maine, 2005-2009
4.1	96	Injury deaths, hospitalizations and emergency department rates: frequency, percent of total deaths, and rate per 100,000 by sex, Maine, 2004-2008
4.2	97	Leading causes of injury deaths and hospitalizations and outpatient ED visits by sex, Maine, 2004-2008
4.3	99	Frequencies and rates of death, hospitalization and outpatient ED visits for the Maine Injury Prevention Program priority areas by sex, Maine, 2004-2008
4.4	102	Leading causes of injury mortality among females by age, Maine, 2004-2008
4.5	103	Rates of injury deaths, hospitalizations and emergency department visits among females by public health district, Maine, 2004-2008
4.6	105	Rate and number of domestic violence assaults reported to police by public health district, Maine, 2009
4.7	106	Prevalence of lifetime rape or attempted rape among females by age, Maine, 2006
4.8	108	Rapes reported to police by public health district, Maine, 2005-2009
4.9	109	Prevalence of adverse childhood experiences among adults by sex, Maine, 2010
5.1	113	Prevalence of adults reporting that their mental or physical health kept them from doing their usual activities by sex, Maine, 2005-2009
5.2	115	Mean days in last 30 days that mental and physical health not good, females by sociodemographic characteristics, Maine, 2005-2009
5.3	117	Prevalence of anxiety disorder or depression by sex, Maine, 2006-2009
5.4	118	Prevalence of anxiety disorder or depression by sex and age, Maine, 2006-2009
5.5	119	Prevalence of anxiety disorder or depression by sex and public health district, Maine, 2006-2009
6.1	124	Adults who consumed at least 1 alcoholic beverage in the past 30 days or who report binge drinking by sex, U.S. and Maine, 2006-2009
6.2	124	Adults who consumed at least 1 alcoholic beverage in the past 30 days, or who reported binge drinking by sex and age, Maine, 2005-2009
6.3	126	Adults who consumed at least 1 alcoholic beverage in the past 30 days, or who reported binge drinking by sex and public health district, Maine, 2005-2009
7.1	135	Prevalence of overweight and obesity (BMI $\geq$ 25), Maine and U.S. females, 2005-2009
7.2	136	Prevalence of overweight and obesity (BMI $\geq$ 25) by sex, Maine, 2005-2009
7.3	138	Prevalence of obesity and overweight (BMI $\geq$ 25) by public health district and sex, Maine, 2005-2009
7.4	139	Females who met recommendations for moderate or vigorous physical activity, U.S. and Maine, 2005, 2007, 2009



## Table & Figure Index

7.5	139	Adults who met recommendations for moderate or vigorous physical activity by sex, Maine, 2005, 2007, 2009
7.6	139	Adults who met recommendations for moderate and vigorous physical activity by age and sex, Maine, 2005, 2007, 2009
7.7	141	Adults who met recommendations for moderate and vigorous physical activity by public health district and sex, Maine, 2005, 2007, 2009
7.8	142	Adults who consumed 5+ fruit and vegetable servings per day by sex, U.S. and Maine, 2005, 2007, 2009
7.9	143	Adults who consume 5+ fruit and vegetable servings per day by age and sex, Maine, 2005, 2007, 2009
7.10	144	Adults who consumed 5+ fruit and vegetable servings per day by public health district and sex, Maine, 2005, 2007, 2009
7.11	145	Prevalence of current smoking by sex, U.S. and Maine, 2005-2009
7.12	145	Prevalence of current smoking in adults by age and sex, Maine, 2005-2009
7.13	147	Prevalence of current smoking in adults public health district and sex, Maine, 2005-2009
8.1	149	Prevalence of mammogram testing in females aged 40+ years in past 2 years, Maine and U.S., 2006 and 2008
8.2	150	Prevalence of mammogram testing in females aged 40+ years in past 2 years by age, Maine, 2006 and 2008
8.3	151	Prevalence of mammogram testing in females aged 40 + years in past two years by public health district, Maine, 2006 and 2008
8.4	152	Prevalence of Pap testing in females aged 18+ years in past 3 years, U.S. and Maine, 2006 and 2008
8.5	152	Prevalence of Pap testing in females aged 18+ years in past 3 years by age, Maine, 2006 and 2008
8.6	154	Prevalence of lifetime sigmoidoscopy or colonoscopy in adults aged 50+ years by sex, Maine and U.S., 2006 and 2008
8.7	154	Prevalence of lifetime sigmoidoscopy or colonoscopy in adults aged 50+ years by age and sex, Maine, 2006 and 2008
8.8	156	Prevalence of lifetime sigmoidoscopy or colonoscopy in adults aged 50+ years by sex and public health district, Maine, 2006 and 2008
9.1	159	Healthcare access among females by age, sex, education, and income, Maine, 2009
9.2	160	Type of health care coverage of adults aged 19-64 by sex, Maine and U.S., 2008-2009

# Executive Summary

## Introduction

Although women make up over half of the U.S. population, their unique health needs have not received adequate attention in medical and public health research and practice. A 1985 report by the Department of Health and Human Services, *Women's Health: Report of the Public Health Service Task Force*, concluded that health care and health information provided to women was compromised due to the lack of research on women's health issues.<sup>1</sup> Since this report, there have been significant advances in research on women's health, which have led to improved prevention, diagnosis, intervention and health outcomes for women, but there are still areas where little progress has been made.

The goal of this report is to provide data on major health concerns among women in Maine in order to inform, educate, and improve women's lives. The health indicators documented here provide a useful baseline for understanding women's health. This report provides the up-to-date information on women's access to care, physical and mental health status, reproductive health, substance use and abuse, chronic disease, injury, as well as health activities and use of preventive services.

## Key Findings

### Demographics

- **Maine's female population is older than most other states.** In 2009, Maine's median age was 42.2 years, the oldest in the country. The median age for women in Maine was 43.4 years.
- **Maine's female population has become more racially diverse over the last decade.** Between 2000 and 2009, the percentage of Black females in Maine increased from 0.45% to 0.99%, a 117% increase. Similarly, the population of American Indian females increased 8.9%, Asian females increased 31.6%, and Hispanic females increased 89.6%.
- **More than half of women in Maine over the age of 25 have at least some college education.** However, close to ten percent (9.6%) of all Maine women have not obtained a high school diploma.
- **Whether as a result of not choosing to marry, divorce, or being widowed, many Maine women are living alone today.** Fifteen percent of Maine households are headed by single women and 6% are headed by single men.

### Socio-Economic Status

- **Younger women aged 16-24 outnumbered young men in Maine's labor force in both 2008 and 2009.** In all other age groups, there were more men than women working in Maine.
- **More than 3 out of 4 women with children in Maine work outside of the home.** According to data from the 2005-2009 American Community Surveys, 35% of Maine women aged 20-

## Executive Summary

64 years had children less than 18 years of age at home. More than three-quarters (76.8%) of these women reported that they were currently working.

- **Maine women's earnings lag behind those of men, this trend becomes more pronounced as women age.** In 2009, the median income for Maine males of all ages and occupations was \$42,156 and for Maine females it was \$32,314.
- **Poverty is a challenge facing many Maine women, especially older women and women with children.** Between 2005-2009, 12.2% of Maine women 65 years or older lived below the federal poverty level, compared to only 6.7% of men 65 years or older. In Maine, between 2005 and 2009, an estimated 8.6% of families lived in poverty. Among female-headed single parent families with children, 39.3% were living in poverty compared to 5.5% of married couples with children and 20.6% of families with male head of household with children.

### Reproductive Health

- **Between 2000 and 2009, the population of women of reproductive age living in Maine decreased 8.1%.** In the U.S., there was a 0.5% decline in women of reproductive age during this same time period.
- **Of the reported sexually transmitted diseases, chlamydia is the most frequently reported in Maine and the number of reported cases has increased in recent years.** In 2009, the number of reported cases declined for the first time since 2001. Between 1996 and 2009, the number of chlamydia cases in Maine increased from 965 to 2,443.
- **Of Maine women who gave birth in 2009, 88% initiated prenatal care in the first trimester of their pregnancy and more than 85% received adequate prenatal care.** Since 2003, these figures have remained fairly stable. Between 2005-2009, women were less likely to receive early prenatal care if they were younger, less educated, or a race other than white.
- **More than one in four (26.8%) new Maine mothers in 2009 were classified as obese before their most recent pregnancy;** 13.5% were classified as overweight, and 7.7% of women were classified as underweight.
- **More than 1 in 5 Maine women (21.2%) reported smoking during the last 3 months of pregnancy,** and 26.1% reported continuing, resuming, or beginning smoking after giving birth. Smoking during pregnancy was associated with younger age, lower educational attainment and low income.
- **More than half of all births in Maine in 2009 were to women with education beyond high school compared to 23.3% of 2008 births in the U.S.** In Maine, 1 in 10 births (10.8%) were to women with less than a high school education, compared to 1 in 4 births (26.4%) in the U.S.
- **In 2008, only five states reported lower adolescent birth rates than Maine.** The 2008 birth rate for adolescents aged 15-19 in the U.S. was 41.5 per 1,000; the Maine rate in 2008 was 25.3 per 1,000.
- **In 2009 more than 1 in 3 (39%) new Maine mothers reported that the birth of their most recent child was unintended.** Unintended birth was associated with age, income and educational attainment.
- **Seventy percent of new mothers in Maine who experienced intimate partner violence around the time of pregnancy were not trying to get pregnant at the time they conceived.**

## Executive Summary

About 1 in 20 new mothers experienced domestic violence (DV) by a partner prior to or during their most recent pregnancy. Almost 1 in 3 (29.4%) new mothers in Maine who experienced DV around the time of pregnancy were diagnosed with post-partum depression, compared to 12.5% of women who were not DV victims.

- **Rates of Cesarean delivery have increased by more than 40% over the past decade in Maine and the U.S.** Nearly seven in ten Maine births in 2009 were delivered vaginally and approximately 30% by Cesarean section (C-section). Maine's 2009 C-section rate was similar to the U.S. 2008 C-section rate of 32.3%.
- **About three out of every four (75.2%) children born in Maine in 2007 were ever breastfed.** About half (48.2%) of children born in Maine in 2007 were breastfed for at least 6 months and 18.2% were exclusively breastfed for 6 months.
- **More than 1 in every 10 (11.3%) new mothers in Maine reported symptoms of depression after the birth of their most recent child.** Postpartum depression was more common among younger mothers, mothers with lower levels of educational attainment and income, unmarried mothers and those enrolled in MaineCare. Mothers who reported that their pregnancy was unintended were almost two times more likely than mothers with intended pregnancy to report symptoms of depression after the birth of their child.

## Chronic Disease

- **Asthma is more prevalent among women compared to men in Maine and in the U.S.** Approximately one in eight Maine women (13.4%) have been diagnosed with asthma and still have asthma. Women are also more likely to be hospitalized for asthma compared to men. The gender gap in asthma hospitalizations increases with age.
- **Chronic Lower Respiratory Diseases are the fourth-leading cause of death among females in the U.S. and in Maine.** On average, approximately 400 women die from COPD each year.
- **Lung cancer is the leading cause of cancer-related death for women in Maine and the U.S.** Breast cancer is the second leading cause of cancer-related death among women.
- **Compared to the U.S. women, Maine women had a higher incidence of the leading cause of cancer-related deaths, lung cancer.** The incidence rates of ovarian cancer, colorectal cancer and breast cancer in Maine were not statistically different from the U.S.
- **Between 2005-2009, women were less likely than men to die from heart disease. Women's mortality rate due to stroke was not significantly different than men's except among women 85 years or older, where mortality was higher.** Mortality rates associated with these conditions increased with age.
- **About 8% of women in Maine have diabetes.** Diabetes was associated with higher age, lower income and lower educational attainment.
- **More than 1 in 5 women over age 65 have had all of their natural teeth extracted.** The percent of Maine women who saw a dentist within the past year ranged from 79.4% to 63.3% depending on the age group.

### Injury

- **Unintentional injury is the 6<sup>th</sup> leading cause of death among all females in Maine and the leading cause of death among women between the ages of 15 and 44 years.**
- **Although men are more likely to die as the result of an injury compared to women, women have higher rates of injury-related hospitalizations.** Injury mortality and hospitalization rates are highest among men and women over age 85.
- **Motor vehicle crashes were the leading cause of injury deaths among Maine females between 2004-2008,** followed by unintentional poisoning, unintentional unspecified injuries, unintentional falls, and unintentional suffocation. Suicide-related injury was the 6<sup>th</sup> leading cause of injury death and homicide was the 10<sup>th</sup> leading cause of injury death among females of all ages in Maine.
- **Falls were the leading cause of injury-related hospitalizations for both females and males in Maine between 2004-2008.** Self-inflicted poisoning was the second leading cause of injury-related hospitalization among females.
- **Annually, over 7,500 women in Maine (1.5%) are physically or sexually assaulted by an intimate partner.** On average, about 45% of homicides in Maine each year are related to domestic conflicts.
- **About 1 in 6 Maine women (16.2%) have ever been the victim of rape or attempted rape during their lifetime;** 1.5% of women reported a rape or attempted rape in the past year. In 2009, there were 374 rapes reported, a rate of 5.5 per 10,000 females.
- **More than 60% of women in Maine experienced an adverse childhood experience and more than 1 in 10 experienced five or more.** Almost 1 in 5 Maine women reported being sexually abused during childhood.

### Mental Health

- **More than 1 in 4 women in Maine have ever been diagnosed with depression.** The percentage of Maine women diagnosed with depression decreased as age, education, and income increased.
- **In 2009, Maine women were almost two times more likely than men to report ever having been diagnosed with anxiety disorder (21.0% vs. 11.8%).**
- **Hospitalizations for depression among Maine men and women decreased between 1999-2009;** women were more likely than men to be hospitalized for depression during this period.
- **Education and income were inversely related to unhealthy physical and mental health days per month.** Women who had not graduated from high school reported more than two times the number of mentally unhealthy days and three times the number of physically unhealthy days per month compared to women with a college degree.

### Substance Abuse

- **Approximately half as many Maine women as men reported binge drinking in the past month (10.6% vs 19.9%).** The prevalence of Maine women who binge drank in the past month was similar to that of the national average. The prevalence of binge drinking did not vary by educational attainment or income.

## Executive Summary

- **For both Maine men and women the prevalence of binge drinking decreased with older age.** Over 20% of women aged 18-24 had a binge drinking episode over the past 30 days, compared to 14% for those aged 35-44 years, and 5% for those aged 55-64 years.
- **Over the past ten years, rates of hospitalizations related to alcohol abuse peaked for Maine men and women (in 2004) but then decreased significantly.** The rate of hospitalizations for alcohol have been consistently lower among women compared to men over time, but the size the gap between males and females has diminished in recent years.
- **The number of female clients served by Maine's substance abuse treatment facilities increased 50% between 2000 and 2010.**
- **Over 70% of women at substance abuse treatment facilities were being treated for alcohol or other opiates and synthetics.** Almost 40% were being treated for alcohol abuse and one-third of women were being treated for other opiates and synthetic drugs.
- **The number of pregnant clients seeking substance abuse treatment in Maine increased from 111 in 2001 to 251 in 2010, a 125% increase.** The increase could reflect an increased number of women abusing drugs, or increased awareness in women and providers of the harmful effects of drugs in utero.

### Health Risks and Health Promotion

- **In 2009, almost 60% of women in Maine in 2009 were overweight or obese;** 30.5% of Maine women were overweight and 26.9% were obese. The prevalence of obesity in Maine women has been increasing steadily over time. Obesity increased from 19.7% in 1999 to 22% in 2005 and 27% in 2009; this is similar to prevalence trends in the U.S.
- **In 2009, 54% of Maine women met the recommendation for moderate or vigorous physical activity.** Activity levels are lower in women who are older, and who have less education. The percentage of women who met the vigorous activity recommendations increased steadily with income.
- **Maine women were more likely than men to report eating at least five servings of fruit and vegetables each day.** About 1 in 3 (34%) of Maine women consumed 5 or more servings of fruits and vegetables per day, compared with 21% of men.
- **About 16% of adult women in Maine report that they smoke cigarettes.** Approximately 33% of Maine women who did not graduate from high school are current smokers, compared to 8% of women who graduated from college or technical school.
- **Over 80% of women in Maine aged 40 or older had a mammogram within the past 2 years.** Women with less than a high school education and women with lower incomes were less likely to have had a recent mammogram.
- **Breast cancer screening rates have increased in Maine in recent years.** The percentage of Maine women aged 40 or older who had mammograms within the past 2 years increased from 81.8% in 2006 to 83.3% in 2008.
- **Over 80% of women in Maine have had a pap smear in the past three years.**
- **The proportion of Maine men and women having colonoscopies or sigmoidoscopies increased between 2006 and 2008.** There were no sex differences in the prevalence of screenings for colorectal cancer. The percentage of Maine women who had a colorectal screening was higher than the U.S.

## Executive Summary

### Access to Care

- In Maine, one in ten (10.8%) women reported that in the past year they needed to see a doctor, but could not because of cost.
- About 1 in 5 women aged 18-24 did not have a primary care provider.
- In Maine, 12% of women do not have health insurance, which earns the state a rank of 11<sup>th</sup> best in the nation in terms of insuring women.

### Conclusion

This report examined women's health in Maine and the factors that contribute to women's health and well-being. The findings of this report indicate that although substantial gains have been made in ensuring women in Maine are healthy, disparities still exist and women continue to face challenges that carry health risks. Although this report focuses on women, it is important to realize that by improving women's health and health care for women, we will strengthen women, their families, and our communities. As the World Health Organization noted in their 2009 report on women's health, "Improve women's health, improve the world."<sup>2</sup>

### References

1. US Department of Health and Human Services, *Women's health: Report of the Public Health Service Task Force on Women's Health Issues*. Public Health Reports, 1985. 100(1): p. 73-106.
2. World Health Organization. *Women and Health: Today's Evidence, Tomorrow's Agenda*. 2009 [cited 2011 October 27]; Available from: <http://www.who.int/gender/documents/en/index.html>.



# Background and Introduction

## Why Women's Health?

As a result of differences based both in biology and socially constructed gender roles, being born a male or a female can have a significant impact on a person's health over his or her lifetime. The health of women and girls is of particular concern because in many societies (including the U.S.) women face discrimination based on gender norms and expectations. According to the World Health Organization, women's health and the quality of health care provided to women is impacted by:<sup>1</sup>

- Unequal power relationships between men and women
- Social norms that decrease education and paid employment opportunities
- Exclusive focus on women's reproductive roles
- Potential or actual experience with physical, sexual and emotional violence

Women also have a unique biological makeup that may make them more vulnerable to certain health conditions and outcomes. Women tend to live longer than men, and they are also susceptible to different chronic diseases (e.g., ovarian and breast cancer).

Although women make up over half of the U.S. population, women's unique health needs have not received adequate attention in medical and public health research and practice. A 1985 report by the Department of Health and Human Services, *Women's Health: Report of the Public Health Service Task Force*, concluded that health care and health information provided to women was compromised due to the lack of research on women's health issues.<sup>2</sup> Since this report, there have been significant advances in research on women's health, which have led to improved prevention, diagnosis, intervention and health outcomes for women. According to a 2010 Institute of Medicine (IOM) report, significant improvements in women's health have been made in the mortality and morbidity of specific conditions, such as breast cancer, cardiovascular disease, and cervical cancer; some progress has been made in depression, HIV/AIDS and osteoporosis, but little progress has been made on conditions such as unintended pregnancy, maternal morbidity and mortality, alcohol and drug addiction, and lung cancer. The authors of the IOM report recommend ongoing gender-based analyses and effective communication of findings related to women's health.<sup>3</sup> The goal of this report is to provide data on major health concerns among women in Maine in order to inform, educate, and improve women's lives.

## Public Health in Maine

Maine is the northernmost and largest state in New England and the easternmost state in the U.S. Maine's population is growing at a slower rate than most of the U.S., but aging at a faster rate. Although 80% of American residents reside in metropolitan areas, the majority of Maine's population resides in rural towns and small cities.

Most public health functions in Maine are concentrated at the state level. Although the 2 largest cities (Portland and Bangor) have local public health departments, the state does not have any

## Background and Introduction

county health departments. In 2006-2007, a statewide public health infrastructure was developed to improve the efficiency and effectiveness of the state's public health capacity. The infrastructure that emerged that includes nine public health districts that take into account population, geographic spread, hospital service areas, and county borders (Figure a.1).

Throughout this report, we present data by public health district when available.

The nine Public Health Districts are:<sup>4</sup>

<b>District</b>	<b>Counties/Tribes Included</b>
York	York County
Cumberland	Cumberland County
Western	Androscoggin, Franklin, and Oxford Counties
Midcoast	Waldo, Lincoln, Knox, Sagadahoc Counties
Central Maine	Somerset and Kennebec Counties
Penquis	Penobscot and Piscataquis Counties
Downeast	Washington and Hancock Counties
Aroostook	Aroostook County
Tribal District	Aroostook Band of Micmacs, Houlton Band of Maliseet Indians, Passamaquoddy Tribe of Indian Township, Passamaquoddy Tribe at Pleasant Point, Penobscot Nation

## Background and Introduction

Figure a.1. Maine's Public Health Districts



Source: Maine Centers for Disease Control & Prevention<sup>4</sup>

### About this Report

The goal of this surveillance report is to provide the state of Maine with current and comprehensive data on women's health. The report includes information on incidence and mortality rates of major causes of death, disease and injury, as well as information on risk factors and behaviors. Health-related data systems were analyzed to provide up-to-date information on women's access to care, physical and mental health status, substance use and abuse, chronic disease, injury, as well as health activities and use of preventive services. The health indicators documented here provide a useful baseline to understand women's health and well-being. This report is not intended to fully explain the complex web of sociological, economic, and biological causes that contribute to the incidence of injury, death, disease, or health disparities.

This report is an update to the 2002 report: *Women's Health: A Maine Profile*. The current report focuses on adult women, defined as females aged 18 and older. Throughout this report, we use the term "sex differences" to refer to differences between men and women. According to the World Health Organization:<sup>5</sup> "Sex" refers to the biological and physiological characteristics that define men and women. "Gender" refers to the socially constructed roles, behaviors, activities, and attributes that a given society considers appropriate for men and women. This report includes data on health risks and illnesses related to biologic sex, as well as socially constructed gender roles. For consistency we have chosen to use the term "sex" throughout the report, but we acknowledge the complex forces-- both biological and social--that impact women's health. The terms "female" and "male" are used in the narrative of the report to refer to persons of all ages; the terms "women" and "men" are used to refer to adults.

Throughout the report, we try to report on health disparities. Unfortunately, most of the data systems in Maine do not include adequate numbers of women to report data by race and ethnicity. Based on national data, we know that there are substantial health disparities by race and ethnicity. For information on racial and ethnic disparities in women's health based on U.S. data, we encourage you to visit the National Office of Women's Health website, "Quick Health Data Online" at <http://www.healthstatus2010.com/owh/index.html>.

### Leading Causes of Death Among Maine Women

The leading causes of death among women in Maine between 2004 and 2008 were cancer, heart disease, cerebrovascular disease (stroke), chronic lower respiratory disease, and Alzheimer's (Table a.1).<sup>6</sup> The leading causes of death among women in Maine varied by age (Table a.1). Among women of reproductive age (15-44) the leading cause of death between 2004 and 2008 was unintentional injury, followed by cancer. Suicide was the third leading cause of death among women aged 15-24 and the fourth leading cause of death among women aged 25-44 years. Homicide was the fifth leading cause of death among young women, but was not among the five leading causes of death among women in other age categories. Diabetes was one of the top five leading causes of death among women aged 25-64 years. Among Maine's oldest population of women (aged 65+), heart disease was the leading cause of death, followed by cancer.

## Background and Introduction

Table a.1. Five leading causes of death among females in Maine overall and by age, 2004-2008

<b>Rank</b> (Total deaths)	<b>Overall</b> <b>(ages 1-85+)</b> (31794)	<b>15-24</b> (195)	<b>25-44</b> (783)	<b>45-64</b> (4068)	<b>65+</b> (26677)
<b>1</b>	Cancer (n=6427)	Unintentional Injury (n=97)	Unintentional Injury (n=203)	Cancer (n=1892)	Heart Disease (n=6401)
<b>2</b>	Heart Disease (n=5892)	Cancer (n=18)	Cancer (n=186)	Heart Disease (n=550)	Cancer (n=5320)
<b>3</b>	Cerebrovascular Disease (n=2169)	Suicide (n=18)	Heart Disease (n=78)	Chronic lower respiratory disease (n=212)	Cerebrovascular Disease (n=2031)
<b>4</b>	Chronic lower respiratory disease (n=2018)	Heart Disease (n=11)	Suicide (n=56)	Unintentional Injury (n=203)	Chronic lower respiratory disease (n=1794)
<b>5</b>	Alzheimer's (n=1739)	Homicide (n=8)	Diabetes (n=23)	Diabetes (n=138)	Alzheimer's (n=1720)

Source: Maine Vital Records Data<sup>6</sup>

Note: Unintentional injury includes motor vehicle crashes

### References

1. World Health Organization. *Health Topics: Women's health*. [cited 2011 July 14]; Available from: [http://www.who.int/topics/womens\\_health/en/](http://www.who.int/topics/womens_health/en/).
2. US Department of Health and Human Services, *Women's health: Report of the Public Health Service Task Force on Women's Health Issues*. Public Health Reports, 1985. **100**(1): p. 73-106.
3. Institute of Medicine, *Women's Health Research: Progress, Pitfalls, and Promise*. 2010, Washington, DC: The National Academies Press.
4. Maine Center for Disease Control & Prevention. *Local Public Health Districts*. 2011 [cited 2011 August 26]; Available from: <http://www.maine.gov/dhhs/boh/olph/lphd/index.shtml>.
5. World Health Organization. *Gender, Women and Health*. [cited 2011 October 26]; Available from: <http://www.who.int/gender/whatisgender/en/>.
6. Maine Center for Disease Control & Prevention, *Maine Vital Records Data (Birth and Death Certificates)*. 2011.

# Technical Notes

## Glossary

**Age-Adjusted Rate:** Age-adjustment is a method used to better ensure comparability of estimates (e.g., rates) with respect to age. The age distribution of a population may change overtime and differ from place to place. Because some health conditions or diseases are more common in certain age groups of people, it can be misleading to compare rate or prevalence estimates of populations if the age distributions of the populations compared are different. A rate is age-adjusted by applying age-specific rates in the population of interest to the U.S. 2000 Census standard population. Age-adjusted rates are relative, and should not be considered exact rates that necessarily represent the true underlying burden of disease in the population.

Additional information on age-adjustment is available at:

[www.cdc.gov/nchs/data/statnt/statnt06rv.pdf](http://www.cdc.gov/nchs/data/statnt/statnt06rv.pdf) or [www.cdc.gov/nchs/data/statnt/statnt20.pdf](http://www.cdc.gov/nchs/data/statnt/statnt20.pdf).

**Confidence interval:** Confidence intervals quantify the degree of uncertainty in rate or prevalence estimates that results from sampling or random variability. The confidence interval presents a range of values within which the true underlying rate or prevalence is likely to lie. The 95% confidence interval is most commonly used, and is presented in this report. In this report, we base our determination of statistical significance on whether the confidence intervals of compared estimates overlap. Non-overlapping confidence intervals are considered statistically significant.

**Death (mortality) rate:** The number of deaths during a specific period of time divided by the size of the population during that period of time. The result is often multiplied by a constant, such as 100,000, to represent the number of deaths per 100,000 people.

**Incidence:** The rate with which new cases of disease have developed, over a defined period of time, from within a previously disease-free population.

**Infant mortality rate:** The number of children in a population who die before their first birthday divided by the number of live births in that population during the same time period.

**ICD-9 and ICD-10:** The ninth and tenth revisions of the International Classification of Diseases, the classification system used to code and classify causes of death. ICD-9 was in use between 1979 and 1998; ICD-10 has been in use since 1999.

**Median:** The median is the number in the middle of a listing of all values by magnitude. This differs from the mean (sometimes called the average), which is a sum of all values divided by the number of values. For example, if a sample of 5 individuals report that their daily fruit & vegetable consumption is 3, 5, 8, 9, and 10 servings, we calculate a median of 8 and a mean of 7.

**Mortality:** A fatal outcome, death.



**Percentage:** A ratio where the value for the numerator is included in the total denominator. Prevalence is a percentage. The prevalence of diabetes is the number of people with diabetes divided by the entire population, with and without diabetes.

**Prevalence:** The percent of the population with a particular condition or characteristic. It is calculated as the number of people in a population who have a health condition divided by the total number of people in the population.

**Public Health Districts:** Regions created for the purposes of data, planning, administration, funding allocation, and the effective and efficient delivery of public health services.

Aroostook District = Aroostook County

Central District = Kennebec and Somerset Counties

Cumberland District = Cumberland County

Downeast District = Hancock and Washington Counties

Mid Coast District = Knox, Lincoln, Waldo, and Sagadahoc Counties

Penquis District = Penobscot and Piscataquis Counties

Western District = Androscoggin, Franklin, and Oxford Counties

York District = York County

Tribal District= Aroostook Band of Micmacs, Houlton Band of Maliseet Indians, Passamaquoddy Tribe of Indian Township, Passamaquoddy Tribe at Pleasant Point, Penobscot Nation

**Rate:** A measure of new events or occurrences in a population. The crude rate is calculated as the number of events per time period divided by the total number of people in the population in the same time period. The crude rate represents the actual burden of disease in the population.

**Significant differences:** In this report, an assessment of significant difference between two estimates, also called statistically significant difference, is based on whether the estimates' 95% confidence intervals (95% CIs) overlap. Overlapping confidence intervals means that the margin of errors of each estimate overlap—thus, the estimates cannot be assumed to differ. Confidence intervals that do not overlap means that each estimates' margin of error lies outside the margin of error of the other estimate(s)—thus, estimates are assumed to differ.

**Standard population:** A population whose known age distribution is used to create comparable statistics (e.g., rates) for populations with different age distributions. In this report, the standard population used to produce age-adjusted rates was the total U.S. population as measured by the year 2000 Census.

## Frequently Used Data Sources

**American Community Survey (ACS):** The ACS is a mail survey that provides demographic, socio-economic, and housing information about communities in between the 10-year census. The ACS is conducted by the U.S. Census Bureau. The survey is sent to a sample of households in the United States. Households that receive the survey are required by law to complete it. Additional information about the ACS is available at: [www.census.gov/acs/www/](http://www.census.gov/acs/www/).



**Behavioral Risk Factor Surveillance System (BRFSS):** The BRFSS is an annual, statewide telephone survey conducted and coordinated by the states, and supported by the federal Centers for Disease Control and Prevention (CDC). The survey was designed to collect uniform, state-specific data on preventive health behaviors and risk factors that are associated with the leading causes of morbidity and mortality. Randomly selected, residential, non-institutionalized adults aged 18 and older are interviewed. Survey data for estimates are weighted to be a representative sample of the state adult population. One aspect of the weighting is the expected response rate by sex and age of the participant. For example, if 1 in 150 female residents between the ages of 18 and 24 were surveyed, then each female participant within this age group is weighted to represent 150 people. It should be noted that responses are voluntary and based on self-reporting.

Documented errors exist in the ability of the BRFSS to accurately reflect certain population indicators. For example, the prevalence of overweight/obesity obtained from the BRFSS through self-reporting is an underestimate when compared to national data based on direct measurement of individuals by trained survey staff. Additional details regarding the design and analysis of the BRFSS data are available at [www.cdc.gov/brfss](http://www.cdc.gov/brfss).

**Hospital discharge datasets:** The hospital discharge datasets include all hospitalizations and emergency department visits in Maine facilities. Analyses for this report were restricted to Maine residents. The datasets are maintained by the Maine Health Data Organization (MHDO), which was established by the legislature in 1996 to collect and maintain “clinical and financial health care information and to exercise stewardship in making this information accessible to the public.”

**Maine Health Data Organization (MHDO):** In 1996, the Maine Legislature established MHDO as an independent organization to collect and maintain “clinical and financial health care information and to exercise stewardship in making this information accessible to the public” (<http://mhdo.maine.gov/imhdo/>). The MHDO is responsible for the emergency department and inpatient hospitalization data utilized in this report.

**Maine Vital Records:** A unit within Maine CDC charged with collecting data on births and deaths within the state and among Maine residents. Raw data from Vital Records are processed by the statistical service unit to produce analysis-ready datasets.

**Pregnancy Risk Assessment Monitoring System (PRAMS):** Funded by the CDC, PRAMS is a state-wide representative survey of new mothers that is currently conducted in 37 states. It has been conducted on an ongoing basis in Maine since 1987. The survey collects data on maternal experiences and attitudes before, during, and shortly after pregnancy. The estimates derived from PRAMS are weighted to be representative of women who have recently delivered live-born infants in the state. For more information about the national PRAMS project, please visit: [www.cdc.gov/prams/](http://www.cdc.gov/prams/). For information about PRAMS in Maine, visit [www.maine.gov/dhhs/bohodr/prams.htm](http://www.maine.gov/dhhs/bohodr/prams.htm).

**U.S. Census Bureau:** The Census Bureau provides data on the people and the economy of the United States. Further information about the bureau’s activities can be found at: [www.census.gov/](http://www.census.gov/).